the engine to ensure effective operation of the first catalyst converter under the second mode of operation.

12. (Amended) A method according to claim 1, wherein the operation of the engine is controlled during the first mode so as to generate the exhaust gas emissions having characteristics that can support acceptable levels of NO_X conversion within the first catalyst converter.

13. (Amended) A method according to claim 1, wherein the first catalyst converter includes a combination of Pt, Rh and Ba elements.

14. (Amended) A method according to claim 1, wherein the first catalyst converter includes a combination of Pd, Rh and Ba elements.

17. (Amended) A method according to claim 13, wherein the proportion of Ba in the first catalyst converter is relatively low as compared to the proportions of Pt and Rh.

18. (Amended) A method according to claim 1, including controlling the operation of the engine during the second mode so as to promote high NO_x conversion efficiency levels within the first catalytic converter.

20. (Amended) A method according to claim 1, wherein the first catalyst converter is provided in the exhaust system at a position sufficiently downstream of the engine such that there is some cooling of the exhaust gas prior to the exhaust gas entering the first catalyst converter.

22. (Amended) A method according to claim 1, wherein the first catalyst converter is a three way catalyst.

23. (Amended) A method according to claim 1, wherein the engine is directed injected.

27. (Amended) An engine exhaust system as claimed in claim 25 for use with direct injection engine whereby said first mode of operation is promoted.

29. (Amended) An engine exhaust system according to claim 25, wherein the first catalyst converter includes a combination of Pt, Rh and Ba elements.

30. (Amended) An engine operating system according to claim 25, wherein the first catalyst converter includes a combination of Pd, Rh and Ba elements.

33. (Amended) An engine exhaust system according to claim 29, wherein the proportion of Ba in the first catalyst converter is relatively low as compared to the proportions of Pt and Rh.

34. (Amended) An engine exhaust system according to claim 25, including a temperature sensing device provided in the exhaust system of the engine for measuring the exhaust gas temperature.

36. (Amended) An engine exhaust system according to claim 34, wherein the engine is operated in the first mode when the sensed temperature is between 200 to 400 degrees Celsius, and the engine is operated in the second mode when the sensed temperature is greater than 400 degrees Celsius.

37. (Amended) An engine exhaust system according to claim 25, wherein the first catalyst converter is provided in the exhaust system at a position sufficiently downstream of the engine such that there is some cooling of the exhaust gas prior to the exhaust gas entering the first catalyst converter.

39. (Amended) A method according to claim 25, wherein the first catalyst converter is a three way catalyst.

43. (Amended) An internal combustion engine as claimed in claim 41 wherein at least some of the NO_x stored in said exhaust treatment system is purged therefrom in response to operation of the engine with a substantially stoichiometric or rich air fuel ratio.

44. (Amended) An internal combustion engine as claimed in claim 41 wherein at least some of the NO_x stored in said exhaust treatment system is purged therefrom in response to operation of the engine with a stoichiometric air fuel ratio.

45. (Amended) An internal combustion engine as claimed in claim 41 wherein said selection is at least in part dependent on engine load demand.

46. (Amended) An internal combustion engine as claimed in claim 41 wherein exhaust emissions generated by said engine at a substantially stoichiometric or rich air fuel ratio and transmitted to said exhaust treatment system operate to purge NO_x stored in said exhaust treatment system.

47. (Amended) An internal combustion engine as claimed in claim 41 wherein exhaust emissions generated by said engine at a stoichiometric air fuel ratio and transmitted to said exhaust treatment system operate to purge NO_x stored in said exhaust treatment system.

48. (Amended) An internal combustion engine as claimed in claim 46 wherein exhaust emissions generated by said engine at a substantially stoichiometric air fuel ratio and transmitted to said exhaust treatment system operate to purge NO_x stored in said exhaust treatment system over a Euro 4 drive cycle.

49. (Amended) An internal combustion engine as claimed in claim 41 wherein the amount of NO_x emitted by said engine to said exhaust treatment system over a Euro III drive cycle is no more than four times the Euro III requirement.

51. (Amended) An internal combustion engine as claimed in claim 41 wherein the amount of carbon monoxide emitted by said engine to said exhaust treatment system over a Euro III drive cycle is no more than three times the Euro III requirement.

52. (Amended) An internal combustion engine as claimed in claim 41 wherein the amount of hydrocarbons emitted by said engine to said exhaust treatment system over a Euro III drive cycle is no more than ten times the Euro III requirement.

53. (Amended) An internal combustion engine as claimed in claim 41 wherein said engine is a direct injection gasoline engine.

54. (Amended) An internal combustion engine as claimed in claim 41 wherein said engine is a dual fluid direct injection engine.

58. (Amended) An internal combustion engine and exhaust treatment system for a vehicle as claimed in claim 55 wherein the amount of hydrocarbons emitted by said engine to said exhaust treatment system over a Euro III drive cycle is no more than ten times the Euro III requirement.

59. (Amended) An internal combustion engine and exhaust treatment system for a vehicle as claimed in claim 55 wherein the amount of carbon monoxide emitted by said engine to said exhaust treatment system over a Euro III drive cycle is no more than three times the Euro III requirement.

60. (Amended) An internal combustion engine and exhaust treatment system as claimed in claim 55 wherein selection of a substantially stoichiometric air fuel ratio is dependent at least in part on driver demand.

61. (Amended) An internal combustion engine and exhaust treatment system for a vehicle as claimed in claim 55 wherein for substantially all of the lean air fuel ratios, said electronic controller operates said engine with EGR levels of 25% by mass or greater.

62. (Amended) An internal combustion engine and exhaust treatment system for a vehicle as claimed in claim 55 wherein said engine is a direct injection engine.

63. (Amended) An internal combustion engine and exhaust treatment system for a vehicle as claimed in claim 55 wherein said engine is a duel fluid direct injection engine.

66. (Amended) An internal combustion engine as claimed in claim 64 wherein the selection of said substantially stoichiometric air fuel ratio is effected independent of the amount of NO_x stored or calculated to be stored in said exhaust treatment system.

67. (Amended) An internal combustion engine as claimed in claim 64 wherein the amount of NO_x emitted by said engine to said exhaust treatment system during said Euro III drive cycle are no more than four times the Euro III requirement.

68. (Amended) An internal combustion engine as claimed in claim 64 wherein the amount of NO_x emitted by said engine to said exhaust treatment system during said Euro III drive cycle are no more than three times the Euro III requirement.

69. (Amended) An internal combustion engine as claimed in claim 64 wherein the amount of carbon monoxide emitted by said engine to said exhaust treatment system during said Euro III drive cycle is no more than three times the Euro III requirement.

70. (Amended) An internal combustion engine as claimed in claim 64 wherein the amount of hydrocarbons emitted by said engine to said exhaust treatment system during said Euro III drive cycle is no more than ten times the Euro III requirement.

71. (Amended) An internal combustion engine as claimed in claim 64 wherein for substantially all of the lean air fuel ratios, said engine operates with EGR levels of 25% by mass or greater.

72. (Amended) An internal combustion engine as claimed in claim 64 wherein said electronic controller selects said stoichiometric air fuel ratio at least as a cumulative measure of emissions transmitted to the exhaust treatment system.

75. (Amended) An internal combustion engine as claimed in claim 73 where said predetermined period of time is elapsed time since said engine operated with a stoichiometric air fuel ratio.

77. (Amended) An internal combustion engine as claimed in claim 72 wherein said cumulative measure is an estimate based on emission levels emitted at each selected air fuel ratio.

78. (Amended) An internal combustion engine as claimed in claim 72 wherein said cumulative measure is based on the amount of time said engine was operated at each selected air fuel ratio.

79. (Amended) An internal combustion engine as claimed in claim 72 wherein said stoichiometric air fuel ratio is selected for a period sufficient to regenerate said exhaust treatment system from stored NO_x and wherein subsequent to said period sufficient to regenerate said exhaust treatment system said electronic controller selects an air fuel ratio dependent on prevailing engine conditions.

80. (Amended) An internal combustion engine as claimed in claim 64 wherein said electronic controller select said stoichiometric air fuel ratio in response to a sensing means operatively arranged with respect to the exhaust treatment system which is able to provide an indication on the amount of NO_x stored therein.

82. (Amended) An internal combustion engine as claimed in claim 80 wherein said selection of said stoichiometric air fuel ratio by the electronic controller to effect purging of NO_x from the exhaust treatment system is also dependent on the volume of a catalyst in the exhaust treatment system.

83. (Amended) An internal combustion engine as claimed in claim 64 wherein said engine is a direct injection engine.

84. (Amended) An internal combustion engine as claimed in claim 64 wherein said engine is a dual fluid direct injection engine.

89. (Amended) An internal combustion engine and exhaust treatment system for a vehicle as claimed in claim 85 wherein said exhaust treatment system has a single canister for locating said at least one catalyst, said canister located remotely from an exhaust port of said engine and not within an engine compartment in which the engine is installed.

91. (Amended) An internal combustion engine and exhaust treatment system for a vehicle as claimed in claim 85 wherein exhaust emissions generated by said engine when operated with a substantially stoichiometric air fuel ratio operate to purge NO_x stored in said exhaust treatment system during said Euro III drive cycle.

92. (Amended) An internal combustion engine and exhaust treatment system for a vehicle as claimed in claim 85 wherein the amount of carbon monoxide emitted by said engine to said exhaust treatment system over said Euro III drive cycle is no more than three times the Euro III requirement.

93. (Amended) An internal combustion engine and exhaust treatment system for a vehicle as claimed in claim 85 wherein the amount of hydrocarbons emitted by said engine to said exhaust treatment system over said Euro III drive cycle is no more than ten times the Euro III requirement.

94. (Amended) An internal combustion engine and exhaust treatment system for a vehicle as claimed in claim 85 wherein the amount of NO_x emitted by said engine to said exhaust treatment system over said Euro III drive cycle is no more three times the Euro III requirement.

95. (Amended) An internal combustion engine and exhaust treatment system for a vehicle as claimed in claim 85 wherein for substantially all of the lean air fuel ratios, said engine operates with EGR levels of 25% by mass or greater.

96. (Amended) An internal combustion engine and exhaust treatment system for a vehicle as claimed in claim 85 wherein in operation said catalyst is heated by a light off strategy.